

OPTIMIZED MIRROR DESIGN FOR OPTICAL DIRECT WRITE

ABSTRACT OF THE DISCLOSURE

The present invention provides an optimized direct write lithography system
5 using optical mirrors. That is, a maskless lithography system is provided. The
maskless direct-write lithography system provided uses an array of mirrors configured
to operate in a tilting mode, a piston-displacement mode, or both in combination. The
controlled mirror array is used as a substitute for the traditional chrome on glass
masks. In order to avoid constraining the system to forming edges of patterns aligned
10 with the array of mirrors, gray-scale techniques are used for subpixel feature
placement. The direct-writing of a pattern portion may rely on a single mirror mode
or a combination of modes.